GAS JOURNAL

Index to Vol. 337

Jan. 1, 1969-Mar. 26, 1969

The General Index for January to March is followed by an extended Classified Index under the following subject headings:

Area Boards	ii	Editorial Comment ...	iv
British Standards ...	iii	Junior Gas Associations	iv
Authors	iii	Technical Developments	iv
Book Reviews	iii	Trade Notes	iv
Obituary	iii	Trade Publications ...	iv
Personal	iii	I.G.E.	iv
Correspondence ...	iv	Conversion Supplement	iv

Transmission and Distribution iv

Walter King Ltd.

Elm House, 10-16 Elm Street, London, W.C.1.

GENERAL INDEX

A

Abstracts from recent British Patents, 89, 114
Advisory commission on fuels wanted by Lord Robens, 293
Algerian natural gas, 52
Alliance and Dublin Report, 299
Another LNG conference in 1970, 119
Arpet strike new North Sea gas well, 264
Australia—
  Gas for Japan, 168
Off-shore discoveries open new energy vista, 21

B

Belliss and Morcom Ltd., £150,000 order, 351
Blackstone and Co. Ltd., modernised foundry, 351
Britain's record gas output, 198
British Petroleum to drill for natural gas in W. Berlin, 13
British Standards Institution board changes 118
British Steel Corporation chooses oil rather then North Sea Gas, 54
BSC will close Riddings works, 296
BSC wins £2.5 mill. order for gas pipes, 199

C

Central heating sales rise, 244
Changeover to decimal currency, 161
Chromatographic methods in analysing, 299
Coinage sets meter problems, 247
Communication in corrosion control, 146
Conference on valves in the 70's, 294
Consumer Council and gas prices report, 247
Conversion and capital costs, 117
Cost of l.p.g. for industry, 364
Course for engineers, 55

D

Decimal changeover conference, 240
Design study award, 119
Disenchantment among drilling companies 54
District heating conference, 23
Drilling rig insurance, 266

E

Education and training of engineers, 13
Electricity's plans for the future, 239
Emergency force plea on conversions, 13
Engineers urged to use computers, 353

F

First LNG tanker for Libyan route, 226
Flash columns completed in record time, 296
France helps with frozen heat for Britain, 226
Fuel choice for grouped flatlet schemes, 353

G

Gascol Conversions wins new £1.5 mill. contract 197
Gas-equipped restaurant for theatre club, 55
Gas increases its domestic central heating lead, 28
Gas industry restructure Bill meets delay, 197
Gas on the Continent, 8, 9, 110, 137, 138, 243
Gas search and the countryside, 12
Gas takeover plan meets unions' opposition, 264
Gas trunk pipeline, 198
German loan interest rate up ¼%, 355
Gibbons Brothers Ltd. obtains order worth more than £4 mill., 146

H

Holland—
  Cuts natural gas export price, 168
  Doubles natural gas consumption, 118
  Greenhouse growers turn to metered natural gas, 109
Higher natural gas conversion costs, 54
High pressure pipeline link plan, 94
Home Oil and Gas Council to discuss sales agreement, 94
Honeywell—
  Expansion in Scotland, 32
  Name-change, 12

I

ICI company reorganisation, 57
IME, summer meeting, 55
InComTec to hold seminars, 55
Industrial film illustrates pipework specifications and layout by computer, 258
Is there gas under the North Channel?, 28

J

Jonathan, 9, visits North Sea rig, 352

K

Kimmeridge Well One produced more than 100,000 tons of oil, 27

L

Lacq gas output, 226
Large-scale district heating, 27
Libyan gas project, 143
LNG-fuelled car draws US interest, 13
LNG fundamentals course in Chicago, 240
Londonderry Credit Union's new HQ has gas central heating, 55

M

Marlin well, Bass Straight blow out plugged, 53
Meat and gas in joint campaign, 355
Minister and Irish Sea oil and gas search, 12
Minister and status of area gas boards, 32
Minister visits conversion area, 266

N

Natural gas and decimal coins make meters news, 257
Natural gas conversions top the million mark, 294
NBPI gas prices, second report, 195
NCB/Conoco new gas strike, 27
Network analysis programme, 136
New output record, 223
New refinery may mean big import cuts, 198
North Sea—
  Cave-in prospect discounted, 294
  Conoco find, 350
  Exploitation position, 13
  Lecture to senior pupils, 55
  Leman and Indefatigable signings by Shell, Esso, 10
  Leman production ceases after rig trouble, 145
  Limited flow has resumed to Leman well, 223
  Mobil's third strike, 168
  Repair work for well halted by bad weather, 162
  Shell and sea gas price, 354
  'Springboard for industry,' 147

O

Offshore search for oil and gas to be extended to Irish Sea, 94
Oil prices reduced, 197
Ontario's liquefaction plant turned on, 54
Output hat-trick, 244

P

Paper 'The chemistry of high pressure reforming' correction, 55
Parkinson Cowan interim report, 118
Pensions increases, 168
Pipeline technology centre, 168
Place Oil and Gas Company (UK) Ltd., have started drilling for gas or oil in Norfolk, 117
Plant engineers conferemce, 355
Potterton's millionth boiler comes off the production line, 97

R

Radiation Ideal Home stand, 350
Relay valves for gas appliances, 168
Residential courses in fire protection, 296
Retorts may become museum pieces, 147

S

SBGI seminar explores export potential for gas equipment, 93
Sea drilling safety legislation, 223
Search for land-based oil, natural gas in Norfolk, 32
South African gas strike, 55
State plans move on sea gas search, 246
Sugg Board recommends 'accept Thorn offer,' 246

T

Tea and pancakes à la gas poker, 353
Technical Advisory Board formed in Ireland, 198
Thermostats for gas appliances, 355
Thorn and Sugg agree terms, 146
Two orders for Power-Gas town gas plants in Japan, 118

U

UGI forms new installation company, 247
Underfloor central heating—by gas, 259
Untapped fortune in Cardigan Bay?, 352
Uzbekistan finds natural gas reserve, 55

W

Warning for people with warm air heating, 27
Weir, G. and A. Ltd., awarded pumps contract by Iranian Gas Trunkline, 28
West Germany switching to natural gas, 94
Whessoe (Ireland) Ltd. wins contract for oil tanks, 354
Whessoe wins Mexican contract, 247
Woodall-Duckham dividend recommendation, 355

CLASSIFIED INDEX

AREA BOARDS

EASTERN

Display of comparative cooking on town and natural gas, 117
Gold Star natural gas tariff, 12
Record gas output, 27, 94

NORTH EASTERN

Executives told 'aim is cheaper natural gas for industry,' 293
Hull Association of Engineers, 47th dinner, 119
Pattern of conversion, 168

NORTHERN

Gas prices down with conversion, 226

NORTH THAMES

Board to resume conversion work, 117
Vincent Street development, 5

NORTH WESTERN

L.p.g. store for North West, 352
New Gold Star tariff, 53
Record winter for gas, 264

EAST MIDLANDS

Plans for eighth and largest conversion scheme, 146

SCOTTISH

Board has to face staggering bad debts, 352
Conversion plans for Thurso being finalised, 199
Gas heating for £10 mill. housing development 198
New gas supply for Wick, 94

SOUTH EASTERN

Customer enquiries streamlined in new office, 246
Drivers qualify for safe driving awards, 12
New tariffs when natural gas comes, 263

SOUTHERN

Awards for ten top apprentices, 296
Details of gas tariff variations, 145
Mounting sales, 353
Plans for second year of natural gas conversion, 350

WALES

High speed computing, 13
Natural gas price tariffs, 351
Reduces conversion objectives by half, 119

WEST MIDLANDS

Battle for car plants, steelworks and engineering factories, 162
Cheaper heating for commercial and industrial premises, 117
Coleshill Lurgi plant will cease production after April, 27
Jaguar will convert main plant to natural gas, 350

BRITISH STANDARDS

Code of practice for small bore central heating installations, 140
Code of practice on insulation of pipes and plant, 143
PTFE thread-sealing tape, 143
The Government's pressure vessel report, 140

AUTHORS

de Winton, C. J. P.—
Portsmouth, 209
Total energy from natural gas in dual-fuel engines, 333
Forster, C. I. K., Statistical basis to the national fuel policy, 260
Gauthier, C. J., Marketing total energy, 343
Hackett, R. S., Liquefied natural gas storage at Ambergate, 241
Hatfield, J., Liquefied natural gas storage at Ambergate, 241
Hill, R. W., The concept of total energy, 338
Holland, B. H., New approach to old problems, 133
McConnell, S. G., The universities and training of gas engineers, 90
Parry, J., National distribution of natural gas, 191
Robinson, M. T., Odorimeter from Gas Standards Branch of Power Ministry, 111
Saville, C. W., Odorimeter from Gas Standards Branch of Power Ministry, 111
Schofield, M.—
Fuel cells—or gas batteries?, 336
The versatile Friedrich Accum, 87
Scott, J. L., Odorimeter from Gas Standards Branch of Power Ministry, 111
Sherwood, P. W., Hydrocarbon gas technology, 222
Simmons, A., Safety in perspective, 49
Swiss, M., Japanese town gas industry turns to oil, 88

BOOK REVIEWS

'L'industrie moderne des produits azotes,' 114
'The Chemical Industries Association—1968 Directory,' 349
'The training of safety officers,' 89

OBITUARY

Blair, A. T. W., 31
Cooke, Mrs. F. L., 201
Currier, G. E., 31
Derbyshire, J. A., 31
Gross, Dr. N., 201
Marston, W. H., 163
Thompson, W., 163
Wertheimer, P., Dipl. Ing., 14

PERSONAL

Adams, D. R., 99
Adams, I. G., 56
Adams, P. F., 201
Armitage, S., 14
Austin, W. R., 201
Baker, F. E., 31
Baker, W. A. D., 121
Bayliss, E., 364
Beckett, W. H., 31
Bellamy, H., 121
Bennet, R., 99
Bennett, F. M., 266
Bennett, R., 148
Benson, V. R., 121
Berry, R., 164
Binney, R., 163
Birch, C. R., 56
Bircher, C. F., 300
Bird, A. W. F., 148
Bish, H. G., 201
Black, N. D. G., 266
Boak, A. A., 57
Branson, W. R., 31
Brettle, O. S., 31
Brewer, F. J., 266
Broomer, R. J., 148
Brown, W. F., 120
Browne, T. W. B., 164
Bruce, J., 56
Buckley, G. W., 99
Buckley, R. M., 300
Burgess, C. J., 32
Butterfield, A., 98
Campbell, A. J., 266
Campbell, W. J., 248
Capper, H., 201
Carne, S. J., 266
Chadwick, C. S., 121
Chambers, F., 99
Chapman, F., 148
Chapman, G. V., 148
Cheetham, H. S., 300
Cooke, E., 201
Cooke, F., 201
Cook, R. T., 300
Cooper, D. F., 99
Cosh, J. H., 201
Cottrell, A. F., 32, 56
Cowling, B., 99
Crawford, K., 266
Crick, D. W., 164
Croft, M. J., 120
Crofts, B., 164
Crowle, L., 56
Daly, R. H., 121
Dance, E. W. G., 98
Davis, B. M., 57
Davis, J., 163
Dawson, G., 31
de Trafford, D. H., 300
Dean, R., 56
Deavin, S. G., 227
Denning, C. J. V., 266
Dent, T. N., 163
Dewar, D. A., 300
Dimbleby, I., 300
Dimond, R., 14
Dove, A. A., 164
Dumm, R. J., 121
Eden, J. L., 201
Edmonds, R., 354
Eynon, M. V., 57
Foulis, D. M., 120
Fowler, R. J., 56
Gaunt, D., 164
Gibson, T. W., 121
Gilbert, H. C., 121
Glover, B., 31
Gordon, G., 121
Gould, E. K., 57
Greenborough, H. B., 354
Greenhead, G. C. S., 227
Griegg, Mrs. J., 148
Griffiths, T. H., 148
Gunstone, Mrs. E. E., 354
Hague, Sir K., 248
Haken, M., 121
Hall, A., 354
Hall, J., 14
Hall, J. K., 148
Hall, M. A., 300
Halsey-Watson, J., 99
Hampshire, E. O., 56
Harrisberger, T. A., 227
Hayday, F., 31
Haynes, E. A., 98
Haywood, N. J. R., 56
Head, J., 14
Healy, H. B., 99
Heddon, J. S., 57
Henshilwood, C. P., 98
Hesketh-Jones, R. C., 248
Higgins, C. T., 354
Hill, J. W. C., 201
Hill, R., 148
Hind, M., 99
Hitchcock, J. M., 148
Hitching, P., 266
Houghton, J., 266
Howard, C. J., 57
Hughes, F., 99
Hughes, G. J., 14
Iberal, L., 56
Ing, E. L., 354
Janulatis, V., 201
Johnson, C. O., 56
Johnston, R. E., 201
Johnstone, R., 31
Kennedy, G. L. J., 300
Kiernan, E., 164
Kindersley, T. H., 300
King, P., 120
King, R. S., 148
Laister, P., 248, 266
Lawson, W., 120
Leach, R., 99
Lemons, C. H., 120
Levy, F. L., 227
Leyland, N. H., 14
Lloyd, J. E., 99
Love, D. E., 148
Lunn, C. R., 56
Mace, W. L., 31
Maclaren, I. G., 266
Marsden, Dr. A., 98
Maskell, J. A., 99
Mattock, W. T., 164
McCrae, R. J., 56
McKenna, W. A., 121
McQuillan, L. L., 99
Mendham, A. J., 14
Mensforth, Sir Eric, C.B.E., 148
Middleton, A. S., 98
Millard, W., 56
Miller, K., 163
Mills, C. E., 99
Mills, D. W., 163
Mills, J. D., 148
Milne-Watson, M., 31
Moore, S., 266
Morant, P., 57
Morland, A. H., 163
Murch, S., 201
Napier, G. L., O.B.E., 148
Neal, G., 57
Neill, W. R., 227
Nicholson, E. D., 14
Norman, R. H., 164
O'Donovan, Miss M., 31
O'Neill, R. H., 227
Olden, M. J. F., 98
Oliver, T. S., 56
Owen, K., 300
Page, D., 163
Palmer, Mrs. M. J., 148
Parke, E. G., 364
Parry, B., 57
Partington, H., 56
Pass, D. C., 120
Paterson, C., 164
Patrick, E. A. K., 98
Peck, W. J. A., 300
Percy, A. J., 120
Perrotton, F. A., 57
Philips, C. L., 300
Pickthall, K. L., 99
Pickup, G. A., 98
Pitts, D. W. N., 266
Pleasance, S. L., 14
Pleydell-Bouverie, P., 300
Prigg, J. A., 98
Primrose, I. S., 164
Quinn, P. D., 120
Ray, R. C., 227
Richardson, R., 148
Richardson, R. R., 99
Roake, H. S., 300
Rosier, J. S. J., 227
Runton, D. K., 164
Ryman, L. J., 120
Salmon, Dr. A., 57
Satterly, K. P., 148
Senior, V., 56
Shallcross, W. C., 148
Sharman, R. B., 164
Shearer, J. S., 300
Sheffield, J. V., 56
Silk, J., 248
Small, A. McL., 148
Smith, B. V., 56
Smith, E. K., 120
Smith, Mrs. J., 31
Smith, L. E., 248
Staniforth, A. R., 31
Steed, W. J., 227
Steele, J., 99
Steel, J. E., 32
Stefani, Miss J. M., 31
Stephens, J. J. T., 57
Stout, N. F., 56
Straw, F., 120
Tate, D. H., 121
Teeman, L., 248
Thompson, J. H. N., 57
Thompson, L., 98
Tolleson, J. F., 120
Tongue, R. G., 300
Townsend, J. W., 32
Trueman, R. J., 14
Tudor, J. M., 57

Tunnah, K., 31, 98
Ventris, N., 121
Vickers, N. W., 354
Walker, T. D., 56
Wallsgrove, Dr. E. R., 148
Ward, L., 99
Warren, D., 248
Warry, J. H., 120
Watt, J., 300
Welker, R. H., 266
Weston, G., 164
Whitaker, K. F., 99
Whitehouse, K. S., 57
Wildman, A. E., 148
Wilkinson, G. P., 56
Wilkinson, R. R., 300
Williams, C., 164
Williams, J. M., 248
Wills, D., 201
Winter, Dr. D. A., 14, 56
Wolstenholme, K., 300
Wood, A. J. S., 57
Woodcock, G., 120
Worsfold, R. J., 99
Wright, R. J., 354
Yarde, J., 248

GAS COUNCIL

ABF in natural gas deal, 93
Borrowing abroad, 197
'Guaranteed warmth' heating expansion plan, 244
ICI £250 mill. deal, 53
Killingworth Research Station—
Develops joints repair kit, 220
Opening ceremony, 11
Pipeline orders, 265
Press conference quote by Sir Henry Jones, 10
Price concession on gas for industry, 162
Production and Supply Division, 157
Shellstar contract worth £7.5 mill., 53
'Starter' central heating installations queried by distributors and installers, 264
To raise £31 mill. in Germany, 294
Work due on £650,000 Hinckley control centre, 118

EDITORIAL COMMENT

AGA cooker promotions, 208
A question of price, 332
A revealing day at Bristol, 107
A thing of the past—almost, 48
Australian enthusiasm, 332
Benefits of testing to yield, 47
Brother Duncan, 132
Cause for concern, 156
Developments at Ascots, 156
Electrode boiler, 332
Engineers into managers, 3
Evolution on the sales front, 208
Fiesta or fiasco, 291
Flexibility the key in a crisis, 189
Fuelling method on film, 86
Fuel policy is based on models, 255
Gas and total energy in Britain, 331
High hopes but mixed reception for new scheme, 237
Importance of LNG today, 256
King of the joiners, 20
L.p.g. contender in a fuel free-for-all, 19
Lush launch, 238
Malice in Wonderland, 132
Missing the boat, 155
Modest exhibitionist, 132
Pin-ups au poivre, 20
Rationalisation, 292
Scientific approach vindicated, 131
Servotomical progress, 156
Telegraphed punch, 190
The CEI—a qualifying role for the JIE, 207
The real answer, 332
The search off Norway, 4
The tariff battle, 238
Understanding—the key to PR, 85
'Which?' on cookers, 108

CORRESPONDENCE

Higgins, A. G., Status and qualification of the gas technician, 265

I.G.E.

Examinations pass list for 1968, 265

TRADE PUBLICATIONS

Bailey, W. H., Sir and Co. Ltd., 52
Ether Ltd., 26
Hendley, C. A. and Company, 92
Thompson, J., (Pressure Vessel Division) Ltd, 92
Victor Products (Wallsend) Ltd., 92
West's Piling and Construction Co. Ltd., 92
Yorkshire Imperial Metals Ltd., 26

TRADE NOTES

Boby, W. and Co. Ltd., 249
Bristol Piping Co. Ltd., 299
Cementation Construction Ltd., 249
Construction Industry Research and Information Association, 12
Controls Company, 94
Parker, F. and Co. Ltd., 168
Poddy, P., Ltd., 299
Press, W. and Son, 94
Pye of Cambridge, 299
Servotomic Ltd., 299
Standard Telephones and Cables Ltd., 299
West's Piling and Construction Co. Ltd., 299

TECHNICAL DEVELOPMENTS

Allen, P. W. and Company, complete range of endoscopes, 26
Atlas Copco (Great Britain) Ltd., Super Silensair, 116
Belliss and Morcom Manufacturing Ltd., new horizontal compressor, 24
ELGA—
Butterfly valves, 26
Shear seal valve, 24
Foxboro-Yoxall Ltd., pneumatic instruments, 115
International Gas Apparatus, flow computer, 25
Irving Air Chute of Great Britain Ltd., 'Feet-First' rescue harness, 25
Standard Telephones and Cables Ltd., mobile radio equipment, 9
Varian Associates Vacuum Division, automated gas analysis, 92
Waller, George and Son Ltd., dual orifice carrier, 25

JGA

Midland Association dinner dance, 352
Northern engineers undertake mock marketing exercise, 296
Western juniors visit SMC, 118
Yorkshire juniors' short paper day, 168

CONVERSION SUPPLEMENT

A
Appliances and natural gas, 284
C
Computer control for North Western Board's changeover programme, 276
Continental know-how will aid change to natural gas, 42
F
Ford, E.—
H. & G.—Sofregas partnership meets challenge, 37
Natural gas comes to North Staffordshire, 273
K
King, P. W., Gas goes to hospital, 177
M
MPs query conversion progress, 43
N
New horizons, 182
New Year message from Sir Henry Jones, 37
North Sea gas comes to the motorway, 182
NTGB eliminates many conversion snags 184
P
Portrait of Minnegasco 20 years after C-day, 173
R
Rhodes, K. G., Natural gas and the working flame, 277
S
Southern Gas Board—
Improves telephone communications, 184
Uses Air Products to help conversion, 43
T
Taped commentary to filmstrip 'Fire fighting equipment for industry and commerce,' 181
W
Wales Gas Board plans for conversion, 183

TRANSMISSION AND DISTRIBUTION

A
API monogram for Spencer works, 326
C
Cameron, R. W. N., Flow measurement in the gas industry using radioactive tracers, 312
Clayton, Dr. C. G., Mobile system for measuring flow in a gas distribution network, 313
E
EGB has installed a pressure reduction and metering system, 68
Evans, Dr. G. V., Mobile system for measuring flow in a gas distribution network, 313
F
Fail-safe valve actuators contract, 311
Fluid network analyser for students of gas engineering, 311
G
Gnat three-wheeler helps with pipeline inspection patrols, 310
H
High-pressure centre valve for commercial applications, 324
High pressure gas storage for NGB, 321
L
Llandybie advance factory for Morgan Marine 80
N
NEGB installs first high pressure gas storage 'bullets', 223
O
Olden, Dr. M. J. F., Flow measurement in the gas industry using radioactive tracers, 312
P
Pickering, E. W., Yield testing of steel transmission lines, 69
Pipelaying slings made from nylon, 219
Plans announced for 800-mile Trans-Alaska pipeline, 324
Protecting pipe joints with polyethylene sleeves, 206
Pye communications link for SEGB, 218
R
Robinson fittings installed at Bacton, 326
S
Spackman, Dr. R., Mobile system for measuring flow in a gas distribution network, 313
Stacking up high pressure gas vessels, 65
Streamlined flow regulator design solves gas pressure reduction noise problems, 320
SWGB awards contract to Corrosion Engineers Ltd., 68
Swiss, M., Paris pipeline crosses the Seine, 205
T
Tunnel will carry North Sea gas under ship canal, 300
Turbine-compressors help Holland with Gasunie system, 323
V
Valve repairs, 326
W
Walters, W. J., Reception, transmission and storage of natural gas, 208
Webb, Miss J. W., Mobile system for measuring flow in a gas distribution network, 313
WMGB awards pipeline contract, 323

GAS JOURNAL

Index to Vol. 338

April 2, 1969-June 25, 1969

The General Index for April to June is followed by an extended Classified Index under the following subject headings:

Area Boards	ii	I.G.E.	iv
Authors	iii	Trade Publications ...	iv
Book Reviews	iii	Trade Notes	iv
Personal	iii	Technical Developments	iv
Gas Council	iii	J.G.A.	iv
Obituary	iii	Gas Consultative Council	iv
Editorial Comment ...	iii	Conversion Supplement	iv
		Transmission and Distribution	iv

Walter King Ltd.

Elm House, 10-16 Elm Street, London, W.C.1.

GENERAL INDEX

A

Abstracts from recent British patents, 24, 60, 94, 124
Algerian gas for Spain, 310
Australia—
Gas price cut by 12½%, 309
Gippsland gas for Sydney, 168
More finds, 32
Oil and gas boom continues, 126
Rapid increase in gas demand in the West, 351
Victoria has 25-year supply, 354
Australian Associated Oilfields Group announces discovery of new gas well, 144

B

Belfast scores successes in the Lord Mayor's Show, 394
Big future for district heat?, 125
Biggs, Wall completes second expansion phase, 197
BP seeks natural gas in W. Berlin, 394
British Pump Manufacturers' Association, 386
British Standard code for temperature, 194
B.S.I. conference theme 'Face to face with metrication,' 310
Buyer's views on British Standards, 146

C

Celtic Sea Seismic Consortium enters Irish sea search, 143
Chairman of the International Management and Engineering Group resigns, 30
Changing pattern of gas, 63
Chromatographic analysis of fuel gases, 145
Civil engineering group formed, 143
Clean air awards scheme, 32
Clyde gas and water pipelines, 392
Coal and gas advertising, 99
Computer controls gas-making plant, 310
Computers will bring greater efficiency at lower cost, 166
Continental Oil (U.K.) and N.C.B. in exploratory sea drilling, 30
Conversion accidents very rare, 291
Conversion now in South Australia, 12
Cooper-Bessemer's GMVA8 integral-angle engine compressor under test, 31

D

Derry gas profit up by £17,000, 197
District heat for the new Britain, 144
Dutch natural gas output, 310

E

European Commission's outline for common energy policy, 28
Experts' report may mean sky flats' gas cuts have to stay, 165

F

Fact-finding visit to U.S., 311

G

Gas achieves another 12% increase, 98
Gas appliances on show at health exhibition, 168
Gas central heating jumps ahead, 125
Gasfitters visit works, 165
Gas on the Continent, 96
Government rejects single state industry ministry proposal, 394
Grants for training, 196
'Guaranteed warmth'—opportunity to make a breakthrough, 97
Gulf Oil poised for Irish Sea search, 329

H

Help for gas equipment exporters, 196
Humphreys and Glasgow awarded £¾ mill. contract, 143

I

Ideal Home results support heating scheme marketing strategy, 63
If and when for Irish Sea gas, 125
Illiffe Science and Technology Publications Ltd. publish new information bulletin, 306
Institute of Fuel luncheon, 166
Institute of Measurement and Control silver jubilee, 292
International conference on SI units, 164
International Gas Conference held in Paris, 331
Iran natural gas network, 354
Israeli strike, 30
Is there hope for more North Sea gas?, 7

K

Keeping in good odour with the public, 354
Keeping up standards, 31

L

Large rises advocated for state industry leaders, 9
London Engineering Congress, 394

M

Main Morley Ltd., and R. & A. Main to merge, 196
Midland Heating and Ventilation Co. Ltd. wins Hinckley services contract, 197
Minister and North Sea gas supplies, 98
Ministry appointments, 293, 332
Miss Great Britain opens showroom, 166
Mobil holds second gas liquids international conference, 166
More drilling off Cape, 146
Motherwell Bridge Engineering Ltd., has obtained a contract from the Gas Council, 293

N

NALGO—
Conference theme productivity, 381
Opens home for retired members, 30
Natural gas aid for Australian ceramics, 292
Natural gas burner, 10
Natural gas hits tar, 145
Natural grid pipeline will make industry No. 1 sales target, 392
New BSI publications, 99
New system for strengthening high-rise buildings, 354
New system will produce smokeless fuel, 10
North Sea—
Bacton planning, 329
Bacton terminal ready for gas demands, 321
BP's operations, 146
Burmah Oil drilling disappointment, 309
Control systems, 166
Drilling rigs return, 145
Dutch find, 10
Leman output resumption, 196
Leman supplies satisfactory, 394
MPs ask about reserves, 144
MPs query winter's effect on drilling rigs, 10
NCB and natural gas, 293
New strike, 63
Phillips and Arpet Groups sign operating agreement for Hewett field, 32
Progress report, 392

P

Pay rise for Britain's gasmen, 100
Perpetual spring in air-conditioned shopping centre, 117
Plans to convert 1 mill. more customers in 1969-70, 98
Platon factory extension inaugurated, 310
Plumbers upset by package deal, 63
Potterton—
Millionth boiler is now installed, 329
To develop Warwick and Leamington works, 146
Problems for Dutch gas marketeers, 397
Problems from privately installed meters, 392
Process Heating Exhibition, 393

R

Radiation dinner for employees with more than 25 years' service, 198
Revised standard on work study terms, 397
RoSPA grant approval for course, 397

S

Salford University's £1.7 mill. civil engineering building opened, 331, 352
S.B.G.I. Chairman and small industrial consumer conversions, 196
Scottish smoke control orders, 126
Second thermal analysis school, 149
Seven-week industrial safety course, 149
Severely corroded gas pipework renovation, 355
Short course on heat and mass transfer, 354
Signed for gas central heating, 126
Site decision needed, 292
South Africa—
Oil hopes, 32
Sea gas strike, 12
Standardise plea, 98
Swedes will seek gas, oil in Baltic, 126
Symposium on control of H.P. gas systems, 126

T

Terms relating to gas chromatography, 292

U

Underground storage for high pressure gas, 291

V

Valves symposium a success, 292

W

Welders offered £150-a-week for work on North Sea pipeline, 394
Welding Institute revises membership regulations, 159
Wellman Engineering Corporation Ltd.—
Area changes, 199
Forms new company to expand gas interests, 30
Whessoe links with U.S. firm, 146
Women's Gas Federation annual meeting, 352
World Digest, 391

Y

York to lose its 200 ft. gasholder, 393

CLASSIFIED INDEX

AREA BOARDS

EASTERN
New non-domestic tariffs for natural gas, 351
Tele-communication modernisation, 355

EAST MIDLANDS
Gas output rose to 609 mill. therms, 293

NORTH EASTERN
Trophy holders in finals again, 196

NORTH THAMES
Biggs, Wall & Co. Ltd., awarded contract to construct Essex gas main, 146
Colour magazine by the end of September, 166
Conversion in the Bracknell area, 196
Extends programme still more, 196
First aid competition winners for the fifth year, 392
New office block at Southend, 100
Reorganisation and new department appointments, 127
Sold another of its collieries, 293
Storage vessels fabrication and erection to be undertaken by Capper-Neill, 393
To convert all factories in the Slough Trading Estate, 196
Tube assemblies, 355
Will supply natural gas on an interruptible basis, 196

NORTHERN
North Sea gas £1 mill. agreement for Lynemouth aluminium smelter, 143

NORTH WESTERN
Dunlop and Board sign natural gas contract, 146
Members inspect tunnel under ship canal, 144

SOUTHERN
Colour films receive world premiere, 332
Cooker campaign 'splendid effort', 394
Determination to maintain reputation as fastest growing Board, 8
Improved 'phone system at Botley, 144
Long service awards, 293
Open first aid competition, 393
Service and Conversion conference, held at Southampton, 330
Sold 14.3% more gas in 1968, 197
Trio of awards, 292
Women lead in first aid contest, 168

SOUTH EASTERN
Commercial Department appointments, 147
Conversion explained in Sussex, 166

SOUTH WESTERN
Gas price reduced, 309

WALES
Investiture souvenir, 30

WEST MIDLANDS
Series of four sales conferences, 12
Wins huge Black Country gas contracts, 125

SCOTTISH
Area Staff Conference, 121

AUTHORS

Diamant, R. M. E., Natural gas as fuel for district heating, 113
Ford, E., Role of chemical engineering in the gas industry, 160
Gibbon, R. B., An assessment of non-destructive testing, 137
Harrison, G.D.—
District heating by natural gas, 349
Cheaper electricity?, 23
Henfrey-Smith, F. C., Progressive technical outlook needs matching on pay, 191
Hirst, T. B. V., A development in gas quality control, 5
Martin, R. J., Application of operational research to Segas, 59
McCrae, S. R., Effects of change on industrial training, 303
Munday, A. M., Computerisation—a personal view, 25
Richards, R. A. C., Survey of the gas industry in Spain in 1969, 93
Schofield, M., Anniversaries in aromatics, 382
Sherwood, P. W., Hydrocarbon gas technology, 26, 302
Tudor Jones, A., Towards tomorrow—prospects and problems, 384
Wurth, J., German gas situation, 96, 141

BOOK REVIEWS

Gas Council's Film Library Catalogue, 96
Gas Council researches (1967 report), 27
'Heating and Ventilating year book 1969,' 350
Heating and Ventilation Research Association 13th annual report, 350
'Industrial training practices,' 96
Record of British Wood Preserving Association's 1968 Convention, 27
'Steel chimneys,' 27

PERSONAL

Allan, J., 101
Ambridge, W., 332
Amiot, L. F., 147
Anderson, Miss J., 101
Anscombe, L. D., 396
Anstey, J., 353
Atkins, W., 396
Atwell, J. W., 396
Austen, D. J., 35
Aylmer, N. N., 167
Baggett, J. W., 147
Bailey, W., 311
Baker, F. E., 396
Barnes, F. S., B.E.M. 353
Barrett, D. W., 35
Barris, G. M., 353
Bayliss, E., 13
Beckett, W. H., 396
Bethwaite, E., 35
Bird, A. W. F., 199
Blackhall, A., 66
Blair, T., 311
Blake, C. S., 396
Blowers, I. M., 332
Blundell, L. W., O.B.E., 353
Bolton, G. J., 332
Borsay, J., 396
Boucher, C. S., 332
Brettle, O. S., 12
Brooke, D., 13
Broome, R., 35
Broughton, C., 199
Brown, C. H., 353
Brown, Dr. T. D., 167
Brown, W., 13
Budge, G. E., B.E.M., 353
Burns, S., 147
Burrell, S., 396
Butters, J., 199
Calver, J., 353
Capper, W. P., 396
Carr, A., 396
Carr, Sir H., 167
Chaloner, S. W., 101
Charlett, R. A., 198
Charrington, Sir J., 167
Cheetham, H. S., 127, 167
Clark, J., 199
Claxton, G. F., 396
Cocker, T., 167
Coffee, V., 332
Colebrook, P. V. C., 147
Collins, L. J., 396
Coppard, R., 101
Cowie, R., 147
Cox, A. S., 353
Crawford, J. C. A., 333
Crompton, T., 167
Cross, P., 101
Davis, B. M., 311
Dawson, G., 396
Day, J. F., 127
D'Cruz, D. G., 35
de Lannoy, J., 147
Dent, T. N., 167
Devereux, E., 333
Dixon, G. T., 198
Downton, A. M., 198
Dyde, J. H., 127, 311
Eaton, A. D., 333
Edwards, R., 127
Engel, M., 353
Farrell, J. W., 13
Fcirn, B., 396
Fisher, R., 293
Freeman, M. I., 35
Fyfe, A., 199
Galloway, Dr. D. F., 147
Gardiner, H., 198
Glover, B., 396
Green, A., 66
Greenaway, R. W., 13
Greenhead, G. C. S., 64
Hales, G. H., 353
Hall, W. H., 353
Harman, E. H., 127
Harrison, R., 332
Harrison, W. B., 198
Harvey, J. H., 353
Harvey, J. H. W., 332
Hatch, D. W., 396
Heasman, H. V., 13
Heslop, D. T., 13
Hichisson, A. J., 199
Higgins, C. T., 13
Hill, H., 64
Hill, R. W., 147
Hodkinson, W., 127
Hollingdale, R., 311
Holmes, G. E., 353
Houston, B., 167
Hudon, R. R., 198
Hughes, J. W., 396
Hutchison, Sir K., 167
Hutton, J., 198
Idris Jones, Dr. W., 101
Jessup, O., 167
Johnson, R. S., 13, 127, 198
Jowett, D., 198
Kennedy, A. L., 396
Kerr, R., 127
Kettling, R., 35
King, G. D. F., 332
Kings-Norton, Lord, 147
Kuttner, C. A., 127
Laidlaw, R. A., 353
Laithwaite, J., 396
Lidgett, R. A., 13
Lindley, Sir A., 147
Ling, G., 396
Liston, L. H., 333
Mace, W. L., 396
Machowicz, J. T., 13
Maier, Dr. Ing. P., 167
Malumphy, M., 293
Marks, B. A., 332
Mason, R., 127
Mason, R. H., 199
McClurg, M. J., 396
McDermott, B., 64
McLeod, I. M. D., 333
Mervyn Jones, T., 127
Mewse, J., 101
Meynell, Dame Alix, D.B.E., 147
Miller, K. G., 332
Miller-Stirling, A. E. S., 167
Milne-Watson, Sir M., 353
Milner, E., 147
Milner, E. S., 66
Montgomery, C., 396
Moreland, C. M., 333
Moreland, J. S., 333
Morgan, J. W. H., 396
Morland, H., 167
Moses, C. L., 353
Mosley, Miss C., 198
Murray, R. M., 101
Needham, H. C., 396
Newman, H. C., 35, 147
Nicholson, E. D., 167
Northfield, G., 101
Ogden, H. L., 199
Olden, M. J. F., 332
Osbourne, R. H., 101
Owen, K., 35
Page, F. R., 199
Palethorpe, H. J. E., 13
Palmer, J. M., 35
Patterson, J., 199
Phillipps, I. H., 147
Phillips, W. G., 353
Pickering, H., 101
Plummer, J. R., 13
Porter, H., 333
Raby, K. F., 396
Ramsay, J., 332
Raybaud, T., 333
Reimann, M., 396
Rigden, R. J., 396
Ritchie, J., 167
Roach, W. H. G., 353
Roast, C. A., 167
Robinson, F. W., 396
Round, W. E., 13
Ryan, D. V. C., 332
Ryan, P., 167
Sandford Smith, R. H., 311
Sarjeant, K. J., 353
Scott, D. W. G., 35
Scotting, J. F., 396
Secker, H. W., 396
Shanks, H. W., 311
Shepherd, W. R., 35
Shingler, D. J., 64
Silver, A. J., 64
Simmons, W. J., 35
Simpkin, P. B., 396
Simpson, J. H. W., 311
Singer, L. W., 13
Smith, J. A., 396
Smith, J. R., 167
Snook, W. G. G., 66
Stammers, F. P. S., 13
Starmer, R., 396
Stockdale, W., 147
Stuart, R. T., 167
Sullivan, W., 167
Switzer, J. A., 353
Taberner, J. Q., 167
Talbot, D., 35
Tatham, F. C., 147
Teare, A. C., 396
Teasdale, H., 198
Thomas, G. E., 353
Thomas, P. M., 101
Thompson, J. J., 35
Thornton, T. H., 353
Townsend, J. H., 35
Trendle, A., 167
Vinestrock, D., 127
Walter, C. P., 199
Wandless, A. M., 167
Wardlaw, D., 396
Welch, W. H., 353
Wells, A. H. N., 13
Wheeler, Dr. D. E., 35
White, Mrs. M. U., 13
White, N. P., 35
Wightman, R. J., 101
Willford, R. A., 396
Williams, R. D., 311
Wilson, Mrs. G. I., 13
Wood, S. J., 167
Woodrow, B. C., 101
Wray, D., 13
Wright, Miss N., 311
Wright, W. L., 35
Wyatt, A. T., 199
Young, R., 332

GAS COUNCIL

Awards CJB Pipelines Ltd. new pipeline laying contracts, 309
Booklet urges industry to review fuel usage, 8
Chairman opens new factory in South Wales, 354
Chairman reappointed, 351
Encouraging progress into the industrial market, 351
High speed information retrieval at Watson House, 301
Orders more Italian pipes, 292
Plans gas production from Yorkshire Wells with Home Oil, 97
Sarsden scheme abandoned, 30
To participate at Torquay Festival, 97

OBITUARY

Bennett, J. E., 396
Hodge, L. R., 35

EDITORIAL COMMENT

Achieved on merit, 58
All change for natural gas, 92
An enormous part to play, 135
Boilermakers are ready, 348
Conferences for swinging salesmen, 3
Cooking on natural gas, 348

Cracking the whip, 320
Crisis for the W.G.F., 347
Gas and good design, 190
Gas or gastronomy?, 156
Gastronomic growth, 112
Going it alone, 112
I.G.E. on the Brighton front, 189
Jungle drums, 58
L.N.G. now a worldwide industry, 21
Marketing and sales training, 58
Matter of principle, 380
Models need computers for solution, 57
People who need people, 379
Pipeline inspection, 190
Precise characteristics needed, 22
Professionalism: The key, 22
Putting Bacton into new perspective, 91
Royal occasion at Bacton, 319
Spring in Llandudno, 112
The other side of conversion, 111
The significance of Tradeline, 4
The stentorian technologist, 92
Thoughts on mergers, 136
Total Marketing Conference, 299
West Midlands know-how, 320
Where are the engineering graduates?, 155

I.G.E.

Annual General Meeting at Brighton, 249-290
London and Southern Section's Spring meeting address by Sir Henry Jones, 291
Manchester Section told more consideration of interruptible supplies urged on UK gas industry, 11
Wales and Monmouthshire Section spring meeting, 149

TRADE PUBLICATIONS

Babcock & Wilcox (Operations) Ltd., 194
British Hydromechanics Research Association, 194
Holmes, W. C., & Co. Ltd., 194
Humphreys & Glasgow Ltd., 194
Plenty and Son Ltd., 142
Stewarts and Lloyds Ltd., 194
Wilmot Breeden Truflo Ltd., 194

TRADE NOTES

Amalgamated Power Engineering Ltd., 355
Arkon Instruments Ltd., 10, 168
Brierly, Z., Ltd., 10
Civil and Industrial Engineering Ltd., 397
Clayton, Son & Co. (Holdings Ltd.), 355
Cooper-Bessemer Company, 355
Dean, W. H., & Son Ltd., 397
Honeywell Europe Inc., 355
Morgan Marine Ltd., 10
Platon, G. A., Ltd., 10
Ruston Engine Division, 168
Ruston Turbine Division, 168
Sundstrand (UK) Ltd., 397
Tube Products Ltd., 397
Ward, Thos. W., Ltd., 32
Wellman Engineering Corporation Ltd., 168
West's Piling and Construction Co. Ltd., 397

TECHNICAL DEVELOPMENTS

Arkon Instruments Ltd., Arkon 63 recorder, 306
Becorit Electronics Ltd.—
Miniature metering valves, 27
Miniature pumps, 193
Belliss & Morcom Manufacturing Ltd., new three-stage compressor, 192
Filtration and Valves Ltd., multi-basket mono-in-line strainer, 120
International Gas Apparatus, jet stream pressure regulator, 142
Platon, G. A., Ltd., gas blender, 306
Potterton Ltd., new concept in boiler design, 192
Teknigas Ltd., natural gas burner, 193
The Trent Valve Co. Ltd., sight valve flow indicator, 142

JGA

London and Southern Junior Gas Association attends conference on noise suppression, 145

GAS CONSULTATIVE COUNCIL

West Midlands Council told of Board's conversion success, 10

CONVERSION SUPPLEMENT

A
Australia conversion major problem, 177
B
Board by board plans for 1969-70, 173
C
Campbell, K., Quality control for working flames, 41
Cleall, P., Quality control for working flames, 41
Clearing the way for natural gas in Yorkshire, 50
Cold-rolled steel section helps minimise burner conversion costs, 178
E
Eastern Gas Board back to target rate, 180
Ellis, W. D., Customer service and conversion, 337
H
Holland's natural gas industry produces a minimeter, 174
I
International know-how leads to production of new conversion set range, 179
N
Natural gas—without conversion, 49
N.E.G.B.'s second conversion film documentary, 52
New Zealand prepares for natural gas conversion, 177
N.T.G.B. prefabricated catering units, 40
R
R. & A. Main tries field research with natural gas cookers to iron out conversion bugs, 176
S
Scarborough work on schedule, 47
Scotland ready for first part of changeover plan, 175
Scott, M. F., Wales adopts two-stage conversion, 340
S.E.G.B.—
Begins conversion on June 2, 49
Outlines second year plans at conference, 174
Sharman, R. B., Philosophy of Mond conversion in the Midlands, 181
Special forming machines for steel pipes, 175
T
The use of temporary L.N.G. storage during conversion, 48

TRANSMISSION AND DISTRIBUTION

A
American development for pinpointing leaks in buried pipelines, 70
B
Brady, W. H., Co. Ltd., issues new catalogue, 224
C
CJB—Pipeline contract, Publications, 208
Coulter, D., Liquefied natural gas pipelines for Arctic gas recovery, 366
D
De Frondeville, B., How imported L.N.G. will complement domestic gas, 361
E
Egan, P. C., Frozen in ground storage units for L.N.G. at Canvey Island, 368
Elliott and Garrood universal butterfly valve, 211
F
Ford, E., Inspection and testing: Key to pipeline safety and longevity, 205
H
Hildrew, R. G., Central control in the gas industry, 216
Hutchinson, R., Governing and boosting for local distribution networks, 80
Hy-Mac speeds Lancashire pipeline, 214
I
International complex for world supply of process control valves, 211
J
Jensen, J. T., How imported L.N.G. will complement domestic gas, 361
M
Mapel wins overseas order, 74
Mobile hydraulic testing units, 215
More penetration of European market, 88
Mc
McLellen, B. A. F., Prospects for L.N.G. peak shaving in Europe, 364
N
New gas safety device, 88
North Eastern Gas Board, digital telemetry system, 376
North Thames compressor station project, 224
North Western Board uses 'elephants' to help build new gasholders, 223
O
Oldpack Engineering expands facilities for pressure vessel production, 213
P
Parkinson Cowan Compteurs maximum demand indicator, 210
Plymcote laminated pipewrap tapes, 72
Portable propane/air plant ensures gas supply to natural gas customers, 74
Power-Pack trench filler, 208
Protecto-Wrap anti-corrosive coatings for pipeline protection, 71
S
Saskatchewan Power Corporation develops new trench machine, 212
SEGB national grid extension to Mogador and Cranleigh, 69
Shell-Mex and BP set up British Pipeline Agency, 215
Sood, N., Liquefied natural gas pipelines for Arctic gas recovery, 366
Storage tanks moved by air cushion principle, 72
T
Treated timber landing pad for drilling rig, 221
Turriff pipeline contracts total over £830,000, 214
Twycross, A. E., Prospects for L.N.G. peak shaving in Europe, 364
U
Under pressure tapping saddle, 376
W
Walker, G., Liquefied natural gas pipelines for Arctic gas recovery, 366
Waller semi-mobile gas compressor, 74
Ward, J. A., Frozen in ground storage units for L.N.G. at Canvey Island, 368
Wulff, K. H., How imported L.N.G. will complement domestic gas, 361

GAS JOURNAL

Index to Vol. 339

July 2, 1969-September 24, 1969

The General Index for July to September is followed by an extended Classified Index under the following subject headings:

Area Boards	ii	I.G.E.	iv
Authors	iii	Trade Notes	iv
Book Reviews	iii	Technical Developments	iv
Personal	iii	J.G.A.	iv
Gas Council	iii	Gas Consultative Council	iv
Editorial Comment ...	iv	British Standards ...	iv
Obituary	iv	Correspondence ...	iv
		Conversion Supplement	iv
		Transmission and Distribution	iv

Walter King Ltd.

Elm House, 10-16 Elm Street, London, W.C.1.

GENERAL INDEX

A

Abstracts from recent British patents, 55, 113, 123, 147, 289
Acrow—
  Makes takeover bid for Allied Ironfounders, 151
  Revised bid, 292
Arctic Ocean oil and gas prospects, 11, 237
Australia—
  Clean gas for Sydney, 157
  Major new gas flow near Queensland, 155
  Step nearer a commercial gas field, 155

B

Boards to pay S.E.T. for showroom staff, 94
Boy gains ' Baby of Year ' crown, 223
Britain's buyers to confer, 189
Butane vessel for Isle of Lewis, 151

C

Changing to decimal accounting, 295
Clean Air Congress papers plea, 223
Combustion Engineering Association two-day conference, 237
Competitive bidding, 292
Conoco profits up, 156
Cork dividend, 186

D

Decimal Board booklet is revised, 96
Domestic refrigerators: Improved demand continues, 117
Dreizler, Walter, G.m.b.H. and Co., order a million burner heads, 223

E

Enfield College conference on technological advance and innovation, 29

F

Facts about decimal currency, 155
First World District Heating Convention, 136
Flavel Salesmen's Cup competition winner, 98
French gas sales up 12·4%, 31
Funds offer aids teacher training, 94

G

Gas consumption, 122
Gas Conversion Association inaugural meeting, 98
Gas demand grows as more natural fuel becomes available, 129
Gas distribution in Holland, 51
Gas from Russia may help to answer West German demand, 236
Gas industry interest in computers, 156
Gas on the Continent, 148, 184
Gas plant loan, 157
Gasunie commissions Phase 1 of the world's largest recompression station, 321
Glynwed surprise offer for Allied Ironfounders is under consideration, 222
Guide to ' Going Metric ', 295
Gulf Oil discloses plans for Irish Sea exploration, 96

H

High strength friction grip bolts specification, 238
Home Oil of Canada price delay, 11
Hungary will step up use of natural gas, 238

I

Ideal-Standard-Copperad merger, 97
In brief, 236
Increased demand for domestic refrigerators, 223
Institution of Heating and Ventilation Engineers Annual Conference at Eastbourne, 31
Interruptible supplies, 132
Italian middle-south gas transmission loop completed, 329

J

Japanese see conversion, 12
Joint marketing agreement, 59
Joint marketing move may save natural gas from l.p.g. price war, 94
Junior engineers' meeting, 157

L

Legislation and the fuel user, 49
Longer pipeline, 242

M

Ministry digest of energy statistics, 236
Ministry reassurance on conversion, 129
' Money-Saver ' campaign should give impetus to fire sales, 185
MPs reactions to formation of Hydrocarbons Great Britain Ltd., 116

N

NALGO warns of new pension plan possibilities, 237
National Coal Board annual review, 298
Natural gas as fuel for vehicles, 330
New first aid courses for industry, 226
New series of welding bibliographies, 223
New tankers for l.p.g. service, 89
North America reserves report available, 92
North Sea gas—
  Amoco-Gas Council Leman section makes extensive use of automation, 95
  Hewett field comes on stream, 56
  ICI signs £250 mill. contract, 185
  Leman field development, 222
  Minister announces criteria for next round of Continental Shelf licences, 329
  Progress report, 32
  Supply availability, 129
  Test supplies due soon, 11
  Used in blastfurnace, 11

P

Parkinson Cowan—
  Annual general meeting, 130
  Increases profit potential, 60
Power-Gas wins treatment plant contract, 118
Preparing for decimalisation, 236
Progressive year in gas industry training, 160
Pye Telecommunications Ltd.—
  Gas board orders, 58
  Receives £50,000 contract, 295

R

Respirator specifications, 11
Return on capital, 132
Robinson Willey's new factory unveiling, 98
RoSPA safety course, 117

S

Safety film contest, 237
Second bulletin on co-ordination of underground services, 242
Series of travelling seminars, 289
Shell-Mex and B.P. Ltd., announce halfpenny per gallon off, 97
Shell-Mex butane contract, 117
Smoke control progress, 330
Society of British Gas Industries reorganises its sections, 29
South Africa explores gas possibilities, 60
Speed Soviet natural gas development plea, 31
Steel pipe orders, 97
Stoves Ltd. new office block opening, 12
Sugg, William and Co. Ltd., £100,000 order for warm air heaters, 238

T

Thorn acquires International Janitor, 225
Total energy and district heating, 132
Training levy for gas industry, 330
Twenty-five years of coke research, 32

U

U.K. State industries' return rate on spending goes up to 10%, 223
' Underground nuclear aid ' talk in UK—US acts to loosen rockbound gas, 330
Univac Datafair '69 programme, 151

W

Waller receives £22,000 orders, 330
Welding Institute's autumn conference, 96
Welsh coast research explorations, 132
West's Group prospects, 31
Woodall-Duckham wins naphtha reforming contract in Brazil, 132
World Digest, 93, 218
World Energy Conference proposals, 64

CLASSIFIED INDEX

AREA BOARDS

EASTERN
  Preparations for the change to decimal currency, 155

NORTH EASTERN
  Advertising contract goes to newly-formed agency, 59
  Coal carbonising unit to go, 237
  Gas governors need not freeze up, 57
  Gasholder demolition problem, 186
  Halifax conversion, first phase, 129
  High pressure storage installation commissioned, 117
  Meadow Lane gasworks, 30
  North Sea gas is coming—in five languages, 222
  Record gas sales, 118
  Sir Henry Jones sees conversion work in area, 186
  Thorpe Willoughby site visited by the National Society for Clean Air, 30
  Tingley works may be saved, 57
  Two optional tariffs for users of natural gas, 29

NORTHERN
  Blaydon formal opening, 327
  Radiotelephone additions, 223

NORTH WESTERN
  Computer controls conversion of gas appliances, 57
  Glass may give biggest natural gas coup made by any board, 291
  Manchester University computer techniques in collaboration with Board help keep gas prices down, 97

EAST MIDLANDS
  Player's will have first North Sea gas total energy scheme, 56
  They didn't bank on this, 117

SCOTTISH
  Seeks ' capital cook ', 236
  Toxic gas reduced from 24% to 6%, 132

SOUTH EASTERN
  Visit by Sir Henry Jones, 292

SOUTHERN
  Improved standard of conversions reported, 60
  Process control computer inaugurated, 130
  Sir Henry Jones visits Southampton and Hythe Works, 117

SOUTH WESTERN
  Preliminary review suggests record year, 132

WALES
  Chairman sees Hoover fires made, 295
  Compressor No. 2 is delivered, 156
  Investiture display attracts visitors, 60

WEST MIDLANDS
  Dunlop Company and Board sign ' biggest contract so far ' for natural gas, 58
  Mine gas for BSC, 157
  Plans new offices for three regions, 185
  Round Oak contract signed, 116

NORTH THAMES
  Board members visit Air Products Ltd., 189
  More natural gas on the way, 238
  Natural gas soon for Harrow area, 222
  New tariffs mean cheaper gas for industrial and commercial users, 154
  Tokyo gasmen see conversion, 29

AUTHORS

Allen, A. L., Organising for oil gasification, 7
Bacon, W. H., Reducing noise levels at Swan Village, 124
Brown, R. B., Production gives way to ' operations ', 145
Butler, A. R., £sd machines—to convert or replace?, 285
Corper, M., Poland's natural gas output plans exceeded, 92
Craven, D., The protected gas service, 179
de Winton, C.J.P., Blaydon—the end of an era, 251
Dyde, J. H., Living with change in the gas industry, 25
Higgins, L. F., Organising for oil gasification, 7
Hirst, T. B. V., Remote meter reading, 183
Jones, R., The gas industry in Wales—past, present and future, 112
Morgan, D. J., Organising for oil gasification, 7
Morris, J. E., Increasing calorific value—the Guernsey experiment, 286
Oliver, C. E., Sulphur evolution upon start up of high pressure continuous reformers, 109
Quigley, H. P., Organising for oil gasification, 7
Robertson, J., Maximising growth opportunities, 5
Sherwood, P. W., Hydrocarbon gas technology, 121
Smith, J. P. Unaccounted-for-gas with special reference to leakage, 233
Spackman, A. J., Archaeology of the gas industry, 49
Stanford, L. F. H., Present-day regional administration, 150
Stead, R. E., A productivity agreement on plant maintenance, 53
Swiss, M., Esso Libya now ready to export L.N.G., 217
Toles, G. W., New trend in gas distribution technology, 50
White, R. W. D., A productivity agreement on plant maintenance, 53
Wurth, J., First liquefied natural gas storage in Germany, 51

BOOK REVIEWS

Clean Air Year Book, 123
Tannahill and Son Ltd., sales brochure, 289

PERSONAL

Allcock, J. F., 224
Allen, D. A., 188
Andrew, L. W., 187
Ankers, N., 240
Atkin, J., 63
Austin, R. S., 331
Bachelor, W. C., 224
Bailey, C. G., 33
Bailey, T. W., 331
Banks, A. J., 133
Barker, D. R., 13
Barry, R. J., 224
Basley, J. T., 33
Bateman, J., 224
Bates, J. H. C., 63, 331
Beith, J. W., 158
Bell, F., 33
Bennet, R. H., 13
Best, A. D., 224
Bird, M., 188
Blackhouse, J., 333
Blowers, F. W., 121
Booth, R., 240
Bridges, D. E., 187
Brown, S., 240
Buckley, G. W., 224
Bull, J. R., 331
Butcher, P., 297
Byford, R. W., 98
Byrne, B. R., 188
Campbell, H. E., 221
Cattlin, D. W., 98
Cave, J. C., 224
Chance, P. R., 187
Chilton, S. V., 98
Church, B. J., 13
Clarke, S. J. S., 63
Claxton, G. F., 98
Coales, F. B., 133
Cockayne, G. W. F., 33
Cole, G. F., 33
Collins, W. J., 297
Cook, J. M., 297
Coomber, R. B., 13
Cooper, B., 13
Cooper, D. F., 224, 333
Cope, J. A., 158
Cousins, E. A., 224
Creek, J., 121
Crosland, A., 121
Cross, G. R., 187
Davies, C. L., 33
Davies, J. H., 224
Davies, L., 331
Davis, R., 33
Denham, J., 297
Denning, E., 297
Dickson, G., 224
Dobbs, B. E. J., 331
Dunn, S. K. W., 158
Dyer, A. P., 224
Elderfield, M., 98
Elles, H., 297
Elliott, D. A., 158
Escobosa, P., 121
Farror, R. M., 98
Fear, Dr. E. C., 13
Fenner, G. O., 297
Field, J. A., 33
Flude, Mrs. M., 63
Ford, M., 297
Foster, D., 240
Frieling, G. H., 224
Galley, F., 240
Gamper, A. J. L., 98
Gibbs, F., 63
Gibbs, R. E., 98
Gilbert, A., 63
Gitsham, M., 240
Green, F. W., 188
Gregory, H. V., 224
Gunning, C. J., 158
Hales, L. N., 121
Hall-Craggs, J. F., 331
Harris, D. R., 13
Hayward-Wright, K. A., 331
Head, J. R., 333
Heinrich, K., 224
Henriques, F., 224
Hickman, D. T., 121
Hickman, D. T., 121
Hill, D., 333
Holden, C. M., 224
Holliday, W. C., 224
Hoskin, P. W., 98
Howells, C., 333
Hudson, R. R., 331
Humphries, K. W., 13
Humphries, W., 297
Hunt, C. W. A., 331
Hunt, R. S., 331
Ismay Thomas, Mrs. F., 133
Jackson, E. G., 33
Jasper, G., 240
Jeavons, E. E., 133
Jenkins, C. C., 331
Jewers, W. G., 33
Johnson, E. J., 240
Jones, K. E., 33
Keith, J. M., 133
Kelly, K. K., 13
Kemp, J. H., 133
Keogh, C., 187
Ketcher, T. E., 13
King, J., 121
King, R. S., 13
Kingsnorth, C., 333
Langfield, L., 13
Lee, C., 158
Lewis, J., 240
Lewis, R. H., 188
Lewis, R. H., 331
Love, M. J., 133
Loveall, G. G., 224
Lusher, B., 240
MacGowan, F. J. N., 33
Mack, E. S., 187
Mackie, G. G., 63
Marfleet, S. R., 13
Margetts, J. C., 187
Mather, R., 121
McHugh, J., 33
Mellen, III, A. W., 224
Mercer, R. R., 98
Mills, C. E., 224
Mills, O. G., 13
Minton, M. J., 98
Morgan, L., 297
Morgan, T. A., 241
Morris, B., 241
Mullins, A. F. J., 121
Noone, M. J., 224
Nutt, J. A., 331
Oakes, D., 297
Olsson, W. V., 33
Packer, K. R., 98
Palmer, F. G., 133
Pangbourne, D. T., 63
Parker, P., 331
Parker, W. D., 188
Parsons, E., 63
Pascal, M. C., 13
Paterson, P., 121
Peacock, S., 297
Penson, B. K., 13
Perrin, A., 297
Phillips, A. S., 331
Pickard, J. D., 121
Pickering, E. W., 224
Pickthall, K. L., 121
Polito, J. W., 121
Powell, B. R., 187
Price, H., 297
Priest, A. J., 187
Primrose, I., 118
Purkis, C. H., 187
Ransom, J., 240
Rennie, J. G., 13
Revill, C., 240
Reynolds, I. W., 159
Reynolds, J. J., 121
Rice, J., 331
Rimmer, J., 240
Ringrose, T. S., 133
Ritchie, A., 224
Ritchie, H. H. F., 13
Ritchings, A. R., 187
Roberts, D., 240
Roberts, G. F. I., 297
Robson, T. L., 133
Ross, J. L., 63
Round-Turner, C., 187
Rowbotham, M. B., 33
Ruff, J., 224
Sargent, G. H. A., 63
Savage, D. R., 121
Sawbridge, C. J. B., 98
Scott, Sir G., 13
Shaw, H. E., 133
Shears, A., 121
Simmonds, G. A., 33
Sinclair Thomson, F., 187
Skelton, J. W., 33
Smith, D., 121
Snelus, J., 187
Sollis, T. C., 13
Stammers, F. P. S., 33
Stanley, A. F., 224
Staveley, R., 121
Stokes, G. M., 13
Stone, D. J., 13
Strachan, D., 224
Stroud, K. A., 13
Summers, E. M., 63
Taylor, D. R., 13
Taylor, H., 33
Terry, I. J., 224
Tiley, C. L., 33
Tomkins, A. G., 158
Trachet, Monsieur, J., 133
Tyler, W. K., 33
Van Thal, A. P., 121
von Westerholt, Count, 133
Waddell, Dr. D. G., 13
Wallace, R. F., 159
Watt, R. L., 188
Webb, E. A., 188
Wedekind, Herr, 133
Weidemann, J. S., 98
Weir, T., 133
Whiting, R., 240
Whittaker, K. F., 224
Wilce, E., 63
Wilkins, P. J., 188
Wilkinson, B., 240
Willes, H. G., 98
Willis, D. T., 121
Wilson, A., 188
Wilson, E., 188
Winn, D., 133
Winn, D., 188
Winn, Mrs. J., 133
Woodall, J. D. C., 98
Woodward, H., 240
Wootton, A. J., 158
Wright, S. H., 188
Wykes, P. B., 331
Young, J. G., 188

GAS COUNCIL

Assures Minister of bulk supply tariff, 132
Change of advertising agents, 130
Computer link between Research Station and University inaugurated, 118
Guidance on gas installations in licensed premises, 186
International interest in catalytic rich gas process, 185
Killingworth Research Station gains architecture award, 32

New central heating systems on show, 291
New list of approved catering appliances, 159
Preferential treatment in search of oil and sea gas, 116
Rig, Royal visitor, 161

OBITUARY

Hinder, R. S., 13
Livesey, D. T., 224
Reik, H., 63
Robinson, W., 121
Sewell, E., 133

EDITORIAL COMMENT

A hat-trick for Mr. Elgin, 319
Archaeology and gas, 48
A seminar on gas measurement, 231
A skeleton in the corridor, 283
A testing time for Marketing, 87
Clean air conference, 178
Converters united, 216
Diversification and survival, 232
Electricity's training requirements, 284
Gas demands rise in Belgium, 144
Gas-fired air conditioning, 48
Gas v. electricity in Eire, 4
Heating and ventilating symposium, 23
Heavy lifting without injury, 144
Hoo-Hux on Hutch, 108
Natural gas influences trends, 88
' New dimension ' for the Gas Council, 107
New means of protecting gas services, 177
Paris holds 86e Congres du Gaz, 119
Realistic natural gas prices, 24
Remote meter reading potential, 178
State industries' targets, 4
Tall story, 4
The all-gas home, 3
The case for a marketing jamboree, 215
The diehard dinosaur, 284
Training for redeployment in the '70s, 143
Training today's professional, 47
Wishing for the moon, 108

I.G.E.

London and Southern Section summer meeting, 11
Scottish section A. G. M., 327
Second Supplemental Charter in force, 129

TRADE NOTES

Bray, Geo. & Co. Ltd., 122
Constructors John Brown, 122
ITT Reznor, 32
Motherwell Bridge Engineering Ltd., 59
Robinson Willey, 59
Societe Francaise des Petroles BP, 186
Sugg, William (Export) Ltd., 32
Walker, C. & W., Ltd., 32

TECHNICAL DEVELOPMENTS

Abbott, Birks & Co. Ltd., electrically insulating pipe joints, 219
Brensal Plastics Ltd., glass reinforced polyester meter box, 114
Brooks & Walker Ltd., Toyo valves, 114
Capricorn Industrial Services Ltd., fire fighting ball blanket technique, 221
Elliott and Garrood Ltd., hold and launch platforms, 219
Foxboro-Yoxall Ltd., series of electronic differential pressure transmitters, 220
Permutit, portable de-ioniser, 115
Platon, G. A., Ltd., Flo-Scan BM flow alarm, 115
Pye Telecommunications Ltd., UHF high power amplifier, 115
Robinson, D., & Co. Ltd.—
Electronic pipe proving system, 220
E.M.S. event and fault recorder, 221

JGA

Yorkshire Association President's Day, 59

GAS CONSULTATIVE COUNCIL

North Eastern Gas meeting at Harrogate, 154

BRITISH STANDARD

Dimensions of temperature detecting elements, 59

CORRESPONDENCE

Collison, Lord, C.B.E., Plus 50 industrial bravery award, 161
Diamant, R. M. E., Natural gas and district heating, 12
McLellan, B. A. F., L.N.G. peak shaving in Europe, 52
Parker, W. D., Six burners and two ovens?, 52
Williams, M. A., New light on gas lamps, 330

CONVERSION SUPPLEMENT

A
' A good job in face of tremendous odds ', 172
Australia—conversion setbacks, 169
G
Gannon, S., Contractor's school helps flow of converters, 165
Gas account complaints: A statement, 171
H
Helpful coverage on conversion, 38
Holland buys butterfly valves, 38
N
N.E.G.B. industrial changeover, 166
North Sea gas conversion controlled by computer, 166
North Sea gas used for firing Dunn Bennett hotelware, 38
P
Penhaligon, A. W. K.—
Conversion Southern Style, 39
Conversion Southern Style—Part 2, 167
R
Reassurance on safety of gas appliances, 37
S
S.E.G.B. progress report, 38
S.G.B. announces more natural gas conversion dates, 37
S.W.G.B. plans—Somerset and Gloucestershire first, 171
T
The exception comes to light, 172
W
de Winton, C.J.P. Changeover progress in Segas area, 269
W.G.B., learns conversion lesson, 38
W.M.G.B. high speed changeover for Jaguar cars, 172

TRANSMISSION AND DISTRIBUTION

A
Assembled insulating joints, 83
Australian natural gas pipeline, 83
B
Blunt, J. C., A computer model as an aid to grid control, 315
Brooke, D. F., Future developments in computer techniques for grid control, 306
C
Chlorinated rubber coating protects from corrosion, 82
Compressed air tunnelling for natural gas, 200
Corrosion prevention booklet available from Sellotape, 84
E
Earthing clamp reduces arc-marks, 84
F
Ford, E., Scientific approach to pipeline reinstatement, 301
Ford, E., Twin-pipe crossing of the River Severn, 193
G
Gas Council pipeline will cross boggy and mountainous country, 201
H
Hills-McCanna ball valves, 201
Howitt, R. B., Measurement and control techniques for flowing gases, 70
K
Keeping control of natural gas, 208
L
Leak detection, 306
N
New insertion meter for pipelines, 303
New marketing company for pipeline machinery, 81
P
Pinchin Johnson new interior coating to pipelines, 207
Pipeline equipment at Norwex '69, 69
Plastics pressure pipes and metrication, 207
Pre-Yield testing depot set up as commercial service, 304
Protecto Wrap latest addition, 303
S
Spencer Works secure order to supply Wales Gas Board with spiral weld pipes, 83
T
Title-change and additional sponsor for pipes event, 69
Transmission engineering course for senior gas engineers, 84
U
Underpressure drilling and tapping machine, 202
U.S.S.R.-Bulgaria pipeline planned for 1975, 84
W
Whessoe high pressure gas storage vessels for five area boards, 82
Woodham, S. H., Telemetry and remote control by North Thames, 209

GAS JOURNAL

Index to Vol. 340

October 1, 1969-December 31, 1969

The General Index for October to December is followed by an extended Classified Index under the following subject headings:

Area Boards ii
Authors ii
Book Reviews ii
Gas Council ii
Editorial Comment ii
I.G.E. ii
Trade Publications ii
Trade Notes ii
Technical Developments ... ii
Personal ii
Obituary iii
Conversion Supplement ... iii
Transmission and Distribution iii
Gas in Industry iv

GENERAL INDEX

A

Acrow offer for Allied Ironfounders allowed to lapse, 12
Algerian gas deal, 169
Algerian l.p.g. storage contract worth £1 mill., 384
American Gas Association announces 1969 editions of Gas Facts and the Gas Data Book, 240
Annual reports—record surplus, 56
Annual Review Number—
Analysis, 115
Digest, 137-140
I.G.E., 125
Industrial relations, 123
Lever, H., ' Gas . . . well embarked on major developments ', 113
Marketing, 122
Ministry of Power report, 124
Publicity, 133
S.B.G.I., 144
Technical progress, 117
Training, 143
W.G.F., 145
W.M.G.B.—largest surplus, 116
Ascot club members design new premises, 169
Australian gas flow report, 287

B

Bell will aid oil, gas divers, 239
Berlin 1 test well drilling, 186
Bridlington survey ships, 168
British Standards Institution action on pressure vessels, 383
British Steel Corporation announces, £250,000 home orders for pipes, 287

C

Circulators made in Britain on show in Paris, 168
Clean Air Conference, Eastbourne, 186
Confederation for the registration of gas installers set up, 382
Consumer Council seeks central gas consultative machinery, 347

D

District heating convention, 236

E

Enfield multi-storey flats installed with gas group heating, 331

F

Fire Protection Association, 245
First aid achievements for gas industry women, 310
First Aid contest headed by Southern and West Midlands, 168

G

Gas for America, 30
Gas for health and hygiene, 30
Gas industry's aims for packaged central heating, 307
Gas Industry Training Board visits Bournemouth, 185
Gas street lamp problem solved by battery, 307
Government sets new financial objectives for Gas, Electricity Councils, 30
Gulf Oil-National Coal Board halts Irish drilling, 330

H

Halfcrown withdrawal, 184
Heating and Ventilating Contractors' Association launches new double guarantee scheme, 222
Home Oil of Canada seeks permit, 288

I

I.C.I. refrigeration storage facility, 218
I.G.U. Council meets in Karachi, 349
In brief, 13
InComTec seminar, 186
Installers code conformity, 166
Institute of Fuel arranges Christmas lecture, 218
Inter-board rescue contest, 168
Iranian trunkline tested successfully, 219
Irish Sea searched for natural gas and oil, 349

K

Kestner unit for Paris, 239

L

L.N.G. conference to be held in Paris, 12
' L.N.G.—safety by design ' film, 13
Long service awards, 385
Looking at service conditions, 381

M

Management company for gas turbines and turbo blowers, 239
Management decision through information conference, 214
Maybole places £½ mill. contract, 30
Medals for gas industry employees, 242
Metering Pumps Ltd., joins Gallaher, 239
Ministry of Technology swallows Ministry of Power in massive reshuffle, 30
Ministry of Technology total energy scheme mooted, 238

N

National Joint Industrial Council issues more pay for gas workers claim, 382
National Joint Industrial Council proposes wage increase for manual workers, 330
New booklet on decimal currency legislation, 16
New E.N.A.P. plant, 31
New regulations under 1968 Clean Air Act are brought into force, 14
Newton Chambers Group opens new foundry training area, 245
New Zealand natural gas developments, 298
North Sea—
Bacton visit by industrialists, 171
' Constellation ' drilling rig sinks, 307
Gas Council signs £36 mill. contract, 306
Interest kindles in North Sea oil project, 12
Norwegian oil strike, 306
Princess Anne visits Amoco 'B', 184
Nu-way companies hold heating symposium, 330

P

Parkinson Cowan boosts exports, 186
Paymaster General reveals safety proposals, 285
Pipeline Industries Guild seventh annual lunch, 186
Potterton aids facelift for an old town, 60
Precision Control Aids receives 100,000 orders, 239
Pressure vessels conference, 169

R

Russian gas likely for West Germany, 12

S

S.B.G.I. autumn luncheon, 242
' Scotland—a new look ', 169
Scottish houses heated by gas warm air, 219
Second international conference and exhibition on L.N.G., 383
Shell signs £650 mill. gas deal with Japan, 12
Slough Trading Estate power station installs £100,000 boiler and turbine control system, 240
Summers, Abbott Birks merger statement, 240
Symposium on radio communications, 13

T

Trade unions urged to decimalise dues, 284

U

Using propane safely, 16

V

Vickers-Zimmer Ltd. signs £434,000 contract, 347

W

Waller launches major expansion programme, 349
Woodall-Duckham signs San Paulo contract, 146
World digest, 11, 27, 320, 346

Y

Yorkshire plant permit, 166

Walter King Ltd., Holborn Hall, 100 Gray's Inn Road, London, W.C.1

CLASSIFIED INDEX

AREA BOARDS

EASTERN

'Best kept works' award, 218
Building exhibition held at Peterborough, 14
Inauguration of new service centre for South Herts. region, 348
Pollution-free transport, 330
Record sendouts, 310
Watford turbines produce power from natural gas, 345
Weekend marketing workshop, 236

NORTH EASTERN

Coke output will cease, 310
Mr. Punch goes natural, 171
Natural gas turn-in at Ideal-Standard, 31

NORTHERN

Installing computer, 214

NORTH WESTERN

Charges for gas service up, 185
Gas Council Sales Manager tours new shopping precinct at Nelson, Lancs, 31
High-rise flats get new gas heating system, 310
Tariff for commercial users, 310

EAST MIDLANDS

Boots buys natural gas from E. Midlands Board, 382

SCOTTISH

Conversion—Christmas break in survey in Scotland, 349
Galashiels and Earlston surveys, 168

SOUTH EASTERN

Computer services, 209
Increases operative, 185
Industrial breakthrough, 184
Office block at Kingston opened, 170
Orders compression and storage installations, 239

SOUTHERN

Driving awards presented to 127 drivers, 218
Farewell to chairman, 222
Retirement awards, 146
Service chief interviewed on TV, 240

SOUTH WESTERN

Chairman opens new foundry at Willeys of Exeter, 240

WALES

Decimal currency seminars, 185, 217
'High Speed Gas' giant size advertising sign, 238
Marketing objectives, 167

WEST MIDLANDS

C.E.G.B. visit, 166
FRED puts paid to query delays, 210
FRED to revolutionise service to customers, 13
'Head of league' report by Chairman, 238
Pricing reply, 306

NORTH THAMES

Approves mercantile credit loan, 218
Chairman will not seek re-appointment, 333
Customer accounting enquiry system with automatic retrieval, 319
Teachers learn about natural gas, 170

AUTHORS

Astbury, Dr. N. F., 60th report of Joint Refractories Committee, 299
Corper, M., Rapid advance of Dutch natural gas, 181
Counter, T., The role of the Society of British Gas Industries, 28
de Winton, C. J. P., Natural gas flows in from Hewett Field, 51
Ford, E., Computer controls cranes in automated store, 206
Hacker, M. F., Total energy—a new name for an old system, 378
Hetherington, A. F., Developing relationships within the gas industry, 161
Jarman, H. G., Memphis keeps gas costs low with America's largest L.N.G. plant, 25
Kelf-Cohen, R., Gas Bill 1969: Is logic being pushed too far?, 297
Raybould, R. H., Optimisation of production and bulk distribution, 7
Sherwood, P., Hydrocarbon technology, 216
Steenstrup, N. V., When the light failed what a fire was lit!, 377
Stubbs, C. W., Distribution network designing by computer, 212
Swiss, M., The Japanese gas industry in 1968, 164
Thompson, P. D., Distribution network designing by computer, 212
Wurth, J., 125 years since founding of Hamburg plant, 329

BOOK REVIEWS

Bibliography on pipe welding, 349
Gas came early to Karlsruhe, 10
Metric series flanges and bolting, 186
Tannahill and Son Ltd., sales brochure, 165

GAS COUNCIL

Awards first peak shave natural gas liquefaction plant to BOC-Airco Cryogenic Plant Ltd., 169
Careers publication for graduates, 319
Clean Air Exhibition, 146
Conducts commercial survey, 217
Economic planning—the strategic blueprint for gas, 233
Field trials for natural gas burners, 384
Home Oil-Gas Council agreement, 56
Institute of Housing Managers' conference and exhibition, 222
International Building Exhibition, 240
Irish Sea drilling 'options' for Gas Council and N.C.B., 146
Legislative proposals, 184
Leslie Andrew's farewell party, 290
Paymaster General says legislation will strengthen powers of Gas Council, 287
Permission to build third coastal terminal, 330
Photographic display of swimming pools, 171
Process plant expert committee, 285
Second reading of Gas Bill, 347
Telephone order, 146
The computer as an aid to decision making, 203

EDITORIAL COMMENT

Advertising blockbuster, 24
All together now, 24
Another night, another show, 6
A supreme Gas Council, 160
A third terminal, 318
C.O.M.A. precedents, 202
Communication as an aid to efficiency, 343
Continental peak loads, 296
Conversion—the heat is on again, 273
District heating and the utilities, 231
Fire with a future, 180
Gas and road tar, 160
Gas for commerce, 376
Gas rebounds with a surplus, 49
Gasunie in the ascendant, 318
Golden year of Gaz de France, 232
Great Cooker Show, 180
I.G.U. Moscow, 1970, 376
Information—a launch pad for decisions, 201
Leslie Andrew, 274
Modern Living, 274
More power to their elbow, 296
Natural gas and the fuel market, 317
Need No. 1—accurate forecasting, 5
Point counterpoint, 23
Potterton's hidden asset, 202
'Receiving you loud and clear' 375
'Reformed natural', 344
Safeguarding installation standards, 159
Shock to the system, 160
Socking it to them, 24
Technocratic patron, 274
Total energy interest revealed, 179
Unsolicited testimonial, 296
Watford's gas-fired turbines, 344

I.G.E.

Chairmen's Technical Committee report, 282
Gas Education Committee report, 280
Scottish section visits Cameron, 219
35th Autumn Research Meeting, 275

TRADE PUBLICATIONS

Houdry Process and Chemical Company, 11

TRADE NOTES

Actuated Controls Ltd. moves office, 287
Air Products and Chemicals Inc., 171
Amoco options land, 287
Brierley, Z. Ltd., 14
Maxtamp rammer, 287
Paul Poddy moves, 240
Thompson, John Ltd., 171
Todd Combustion Ltd., 384

TECHNICAL DEVELOPMENTS

Pye Telecommunications Ltd., economical remote alarm indication, 11

J.G.A.

Joint meeting with I.G.E., 167
Manchester District Junior Gas Association, 310
Yorkshire Juniors A.G.M., 170

PERSONAL

Anderson, J., 15
Archer, C. S., 242
Aston, G., 385
Ayers, J. A., 15
Ayers, J. S. D., 15
Badger, E. H. M., 288
Badham, B., 221
Bailey, W., 242, 308
Baldwin, A. C., 288
Bates, C., 172
Beal, M. J., 288
Bean, L., 221
Beardmore, B., 221
Beattie, W., 242
Beeson, W., 242
Berry, R., 15
Blake, F., 242
Blakeborough, J. F., 242
Bland, E. A., 172
Boniwell, M., 32
Bouch, W. E., 332
Bray, G. L., 32
Brewer, J., 187
Brinn, C., 308
Brown, K. E., 332
Brown, R. B., 187
Bruce, N., 147
Buckley, J. W., 147
Bull, J., 221
Burton, W., 288
Cafferty, M., 288
Campbell, I. S., 15
Carmichael, N., 172
Carr, R. M., 385
Carron, Lord, 172
Chadwick, R. H., 172
Chandler, R., 308
Cheetham, H. S., 385
Clark, A. A. H., 15
Coward, W. A., 221
Cox, Miss M., 308
Crosthwaite, I., 172
Culley, F. B., 385
Cummings, W., 332
Davies, Dr. E., 172
Davies, H., 332
Dawson, A., 15
Delacourt-Smith, Lord, 172
Dobson, L. S., 187

Dolby, L., 308
Donnet, C., 15
Doyle, S. L., 385
Drabble, J., 385
Dyble, H. E., 385
Edwards, E. J. 15
Elliott, F. A. P., 242
Farrow, R., 221
Feather, V., 308
Forrester, D., 385
Foster, K. D., 15
Foster, N. J. D., 15
Fox, S., 288
Gadd, J., 147, 221
Gattes, G. P., 187
Giddy, R., 173
Gooud, S. W., 308
Goring, G. E., 187
Grant, A., 308
Grant, A. F., 15
Gray, C. F. R., 15
Gray, J. A., 288
Graybine, B., 187
Green, R. F. G., 385
Greenwood, A., 331
Griffiths, J. C., 385
Halifax, C. J., 288
Halls, R., 172
Hanham, D. T., 288
Hare, A. C., 32
Hart, H. R., 288, 385
Haxby, R. D., 385
Heywood, B., 332
Hikes, L. F., 242
Hill, D. L., 221
Jarvis, J., 15
Jones, A., 221
Jones, M. T., 332
Josiffe, C. A., 288
Jowett, S., 242
Kendrew, F., 385
Kindersley, T. H., 385
Kraemer, P. W., 385
Lambert, T. E., 242
Lever, H., 172
Lewis, J. H., 172
Little, M. S., 308
Llewellin, A. F., 350
Loft, B., 308
Lowton, D., 172
Ludgater, A., 172
Lunn, W. H., 187
Maher, P. J., 385
Marsh, R., 350
Mason, T. E. D., 308
Mateunas, M., 221
McDowell, J., 15
McLean, G., 15
Miller, K., 221
Ming, G., 308
Mitchell, A., 350
Moger, T. A., 15
Morphy, A. R. C., 350
Mullett, A. R. H., 15
Murray, F. J., 385
Nealon, Mrs. R. T., 15
Nicholls, B., 15
Nicholls, J., 350
Nielsen, G., 221
Palmer, A. G., 15
Peacock, J., 332
Peat, J. B., 172
Pellet, L., 221
Penhaligon, A. W. K., 308
Pexton, R. K., 15
Phillips, H. J., 308
Pratt, A. G., 385
Proom, W. A., 187
Rathmell, J., 385
Reading, A. G., 242
Redman, M., 385
Richardson, R., 288
Riley, K., 172
Sanderson, T., 172
Sandford Smith, R. H., 147, 385
Scott, D. T., 187
Shepherd, C., 350
Shepherd, P. A., 15
Smith, E. E., 15
Smith, G. F., 187
Smith, S. A., 15
Spivey, Dr. E., 15
Steel, Sir J., 172
Stevens, R. V., 308
Tallentire, T. L., 187
Tazzyman, R., 172
Thomas, B. E., 332
Thompson, J., 187
Thomson, S. C., 385
Tidswell, J. W., 32
Turner, L. 385
Turner, Dr. S., 288
Varley, E., 172
Veart, A., 15
Vernon, S., 187
Wall, H. J., 308
Warren, W. R., 15
Wearne, E., 332
Webster, A. G., 15
Wedgwood Benn, A., 172
Wenborn, E. N., 385
Wheatley, A. R., 308
Whelan, C., 172
Whitehead, C., 15
Whittaker, D. L., 288
Willats, R., 242
Williams, A., 172
Williams, M. A., 15
Willis, D., 15
Worley, R., 15
Yates, D., 385

OBITUARY

Paten, H. St. J. B., 242
Sylvester, Sir E., 147

CONVERSION SUPPLEMENT

A

Akramatic introduces its new burner range, 226

C

Cradocks cook with North Sea Gas, 227

D

Dayus, M. C., Distribution aspects of conversion, 40
Distribution vital part of conversion programme, 225

E

Easterngas quarterly report, 227
E.M.G.B. Chairman looks at changeover, 328

F

Ford, E., Cambridge changeover: A successful Gascol operation, 37
Ford, E., First major changeover to natural gas on Humberside, 325

N

North Thames progress report, 226

S

Scottish Board announces plans for Peebles changeover, 227
Scottish—natural gas survey, 228
S.G.B. celebrates 100,000th domestic conversion, 44
Southern announces south coast conversion dates, 228
Stornaway converts to butane/air, 42
Stornoway gas supply, 324
Stotts prepares for the arrival of natural gas, 44

T

The role of home service in conversion, 321

TRANSMISSION AND DISTRIBUTION

A

Alexander, A., Diaphragm meters, 69

B

Berrisford, H. G., Gas demand forecasting for medium term economic planning, 363
British Standard publishes specification for thermally insulated underground piping systems, 265

C

Cameron, A. H., Remote transmission and display of meters, 85
C.J.B. (Pipelines) current contracts, 263
Conner, N. E., Gas quality measuring devices, 86
Crutcher Resources Corporation demonstrates automatic pipe welding process, 264

D

de Winton, C. J. P., Arduous pipelining in South Wales, 249

E

East Midlands Gas Board provides security valves for over-pressure protection, 266

F

Field welding of carbon steel pipelines, 263
Friction welding, 256

G

Griffiths, A., Governors in gas measurement systems, 91
Grinding discs by English Abrasives Ltd., 265

H

Horizontal boring for water supply, 96

I

I.G.E., S.B.G.I. combine for gas measurement exhibition and seminar, 65

J

Jarman, H. G., Helicopters solve problem of ' pipeline that couldn't be built ', 367

L

Lucas, T. A., Volume correction and load profile devices, 79

M

Magic Mole pneumatic puncher, 266
Marketing Australia's natural gas, 357

N

Newcombe, J., Secondary instruments for flowmeters, 95
N.T.G.B. introduces Land-Rovers to speed pipeline completion, 367

O

O.E.C.D. booklet—useful reference on pipelines, 364
Offshore Drilling and Production Exhibition, 366

P

Pulsating flow measurement, 366

R

Raybould, R. H., Optimisation of distribution systems, 360

S

Schneider, H. J., Gas turbine meters, 72
Sixth pipes and valves exhibition gets into gear, 263
Smith, J.W., Design and operation of measurement systems, 68
Stubbs, C. W., Short-term gas demand forecasting, 361

T

Thompson, R. J. S., Rotary positive displacement meters, 71

Z

Zanker, K. J., Pressure-differential devices for flow measurement, 92

GAS IN INDUSTRY

A

Alcan Foils plan switch to gas, 172
Allied English Potteries installs gas heating, 77
Ascot gets sportsmen—and women— into hot water at St. Albans, 40

B

Biddle Hydro-Therm boilers, 34
Birlec Ltd., receive an order for heat treatment plant, 16
Birlec sealed quench furnaces for the motor industry, 241
Birlec's new gas-fired mesh belt conveyor furnace, 125
Birmingham tube plant changed to natural gas, 35
Boiler on the roof heats 11-storey flats block, 9
Bournemouth swimming pool heated by gas, 81
Brightside wins £311,000 order, 193

C

Cameron, D., Fords—the conversion of a large industrial complex to natural gas, 112
Catering in Scotland, 71
Chance Pilkington, Wales' first major industrial conversion, 173
Claycutters pottery uses natural gas, 80
Coconut roasting with natural gas, 36
Colt air heaters win Gas Council approval, 57
Colt heater manual, 73
Contractors' fifth costing survey, 255
Controlled atmosphere heat treatment gas furnace, 62
Controlled Heat Treatments Ltd., 56
Copperad introduces Mk. V fan convector range, 54
Crane introduce Whitehall series of commercial boilers, 120

D

Daglish, A. G., Horse power from natural gas—a new market for a new fuel, 190
Dain, R. J., Optimisation of total energy systems, 252
Danfoss safe start burner controls, 263
Danfoss temperature controller, 78
Direct spark electric ignition systems for gas burners, 142

E

Edit.:—
A leap forward for total energy, 261
A 'natural' for the bakery, 205
Beating the drum, 49
Home from home, 137
Immense impact of gas, 157
In the pipeline, 91
Keys to success, 111
Many hands, 227
Quiet industrial front?, 27
The dual fuel solution, 185
The finishing touch, 67
Warm this space, 5
Elliott-Automation introduces new Fisher control valve, 172
E.M.G. burners developed for use with natural gas, 56
Expansion with economy, 169

F

Felcoil dual fuel burner leaflet, 95
Firepack automatic packaged burner, 143
First industrial gas controls handbook, 125
Ford, E.—
A new claimant for the commercial load, 6
A new name in the gas space heating market, 138
Big potential load for gas at Rootes new plant, 210
Pipe-makers extraordinary, 92
Problems and opportunities, 228
Qualcast mows the nation's lawns with the help of gas, 68
Sheffield conversion—a success story for natural gas, 28
Still bigger role for gas in the bakery, 206
The steel drum—a vital aid to industry, 50
Two boilers for the price of one, 123
Further developments at Hamworthy's Dorset process heating division, 95

G

Gas aids export market in Southampton, 54
Gas Council at the Industrial Process Heating Exhibition, 143
Gas Council publication for hospitals, 259
Gas Council's photographic display, 256
Gas-fired water chiller for air conditioning and industrial process applications, 170
Gas provides up-to-date solution for an old heating problem, 194
German fact-finding tour, 172
Gordon and Platt Ltd., turbo-ring forced draught gas, 18
Griffiths pre-treatment plant for radiator shelves, 73
G.W.B. introduces new range of industrial and commercial water heaters and steam raising boilers, 217

H

Harris Engineering Co. Ltd. vacates London office, 122
Henshilwood, C. P., The use of natural gas, 159
Hoggarth, M. L., Dual fuel burners for boiler plant, 186
Honeywell symposia, 32
Hope Superjet Ltd. new power gas burner, 149
Horsler, A. G., Horsepower from natural gas—a new market for a new fuel, 190
Hotwork develops high velocity burners for industrial use, 148
Hutton, J. A. D., Fords—the conversion of a large industrial complex to natural gas, 112

I

Ideal-Standard boiler used to heat Jenkin and Purser Ltd., 146
Ideal-Standard launches three more Concord boilers, 10
Industrial Thermal Services Ltd. training course, 81
Institution of Heating and Ventilating Engineers Summer Conference, Natural gas for heating and ventilation, 158
Iso-Jet system for temperature uniformity in gas-fired furnaces, 74
I.T.T. Reznor—
Launches trade competition, 78
Markets latest gas-fired range of Siaps infra-red heaters, 218
Sales awards, 146
Warm air heating for Robinson Willey's Liverpool factory, 171

J

Johnson, F. J.—Reheating furnaces for non-scaling and non-decarburisation operation, 12

K

Kayanson mobile exhibitions, 81

L

Landis and Gyr's gas burner control, 171
Lennox Industries Ltd., develops warm air heating and ventilating for commercial market, 237
Lesney uses gas to produce minature cars, 233
Lincoln warm air heats Oxford school, 57

M

Maywick ovens double stoving throughput, 256
Minton china fired by N.S.G., 73
Mobile exhibition unit, 173

N

Natural gas and Concorde . . . into High Speed '70s, 260
Natural gas takes the biscuit, 142
New range of side loading hot air re-circulating ovens, 99
NorRayVac improves working conditions at Hindle Auto Products Ltd., 36
NorRayVac offers big saving, 95
Northern Gas Board installs radiant heating, 78
North Thames—
Biggest air conditioning load, 149
Concludes contract with Clifford's Dairys Ltd. for supply of natural gas, 120
Designs and builds furnaces for precious metal refining, 262
Export success, 122
Nu-way gas burner data sheets, 33
N.W.G.B. leads way in Rawtenstall's new shopping centre, 72

P

Pre-fabricated gas boilerhouse unit, 216
Preventive maintenance for the industrial heat exchange industry, 100

R

Rapid heating machine for small billets, 141
Reliance series pressure regulators, 36
Remaking steel drums with the help of gas, 61
Rigby and Evens uses gas to warm wines in storage, 39
Robb, F. F., Horsepower from natural gas—a new market for a new fuel, 90
Roberts, W. R., The use of natural gas, 159
Royal Mint in Wales fired by gas, 34
Russian contracts, 195

S

Scottish Board to use Hawker Siddeley plant, 53
Scottish rolls for Canada, 8
Selectos introduces first range of natural gas burners, 264
Shell and tube heat exchangers, 142
Skerrett, B., Air conditioning by gas, 161
Slough's ultra-modern church has gas heating, 119
Stagg, M. F., Fords—The conversion of a large industrial complex to natural gas, 112
Steelworks conversion, 259
Stordy-Hauck Firecone burners, 56

T

Teknigas electronic control, 212
Thermocompak steel boiler at N.T.G.B., 53
Thornycroft writes Reznor into modernisation programme, 232
Twin Industries Ltd. develops K.N.D. boiler, 58
Typhoon automatic gas burners now manufactured for the British market, 102

W

Wellman extends gas plant range, 173
Wellman Engineering Corporation Ltd. expansion in North Wales, 145
Wellman furnaces to operate on natural gas, 261
Wellman tinprinting ovens, 55
West Midlands attempts to double its industrial load, 96
Wheelchair components stoved in Maywick oven, 160
Whitlock, D., Optimisation of total energy systems, 252
World Digest, 144, 174, 209, 241
Wright, G. F., Air conditioning by gas, 161

Y

York hotel chooses gas, 33